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RONALD F. SHALLAT, M.D. FEBRUARY 17, 2006

1 level of consciousness would be probably the most	11:01:40	1 the release of some as yet unidentified chemical	11:03:57
2 important thing to monitor?	11:01:43	2 from blood that irritates the vessel wall and	11:04:02
3 A. Yes.	11:01:44	3 causes them to constrict.	11:04:07
4 Q. And blood pressure. What else	11:01:44	4 And the bad part of constriction of the	11:04:09
5 would you be monitoring, or within the standard of	11:01:46	5 blood vessels is that may mean that they may not	11:04:14
6 care of a patient who has been diagnosed with a	11:01:47	6 deliver enough blood to the brain, or perfuse the	11:04:17
7 subarachnoid hemorrhage?	11:01:51	7 brain as we call it.	11:04:20
8 A. Well, you would -- if you are	11:01:51	8 Q. That would lead to some pretty dire	11:04:22
9 monitoring blood pressure, you are usually	11:01:53	9 consequences potentially?	11:04:25
10 monitoring pulse, you are monitoring respirations,	11:01:55	10 A. Yes.	11:04:26
11 you might be monitoring oxygen saturation in the	11:02:00	11 Q. So you were talking about -- we	11:04:27
12 blood and so forth.	11:02:07	12 were talking about medications that you might give	11:04:30
13 Q. Let me ask you about that. How	11:02:08	13 a patient who has a subarachnoid hemorrhage, and	11:04:32
14 would you monitor respirations?	11:02:10	14 you mentioned the calcium channel blockers.	11:04:33
15 A. Well, you can hook a patient up to	11:02:11	15 And is that something that -- was that	11:04:36
16 a monitor that literally, you know, counts the	11:02:16	16 your opinion -- is it your opinion that that is	11:04:39
17 excursions of your chest, or you can simply just	11:02:23	17 something that should be given to a patient or	11:04:41
18 go by there periodically as a nurse and count	11:02:25	18 could be given to a patient to --	11:04:43
19 them, you know, breathing 12 times a minute or 20	11:02:29	19 A. Well, it's --	11:04:45
20 times a minute or what have you.	11:02:33	20 Q. -- help prevent vasospasm?	11:04:46
21 Q. Why is it important -- is it	11:02:34	21 A. -- from the literature, and I did	11:04:48
22 important to monitor respirations in a patient who	11:02:36	22 use it when I was caring for such patients. But I	11:04:53
23 has been diagnosed with a subarachnoid hemorrhage?	11:02:39	23 think that the literature is not overwhelmingly	11:04:57
24 A. Well, it's less important in an	11:02:41	24 conclusive that it prevents vasospasm. I think it	11:05:03
25 awake, alert patient than in someone who is	11:02:42	25 suggests that the incidence is somewhat less on	11:05:09
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1 sleepy, sleepy or drowsy or obtunded or comatose,	11:02:45	1 those patients that take Nimodipine.	11:05:11
2 It's very important to monitor then. But in an	11:02:51	2 Q. Okay. But you used it in your	11:05:15
3 awake patient, whether they are, you know, if they	11:02:53	3 practice; is that correct?	11:05:19
4 are anxious or tense, as I said, they are more	11:02:55	4 A. Yes.	11:05:19
5 likely to have their heart rate up, their blood	11:02:57	5 Q. Did you use it over the course of,	11:05:19
6 pressure up, their breathing is more rapid and so	11:02:59	6 you know, the time -- I don't know when this --	11:05:25
7 forth, and that is not necessarily an ominous sign	11:03:03	7 the calcium channel blockers became available,	11:05:28
8 in those cases.	11:03:07	8 but --	11:05:31
9 Q. Would there be any sort of	11:03:08	9 A. Yeah. I don't either, but it	11:05:31
10 medications that you would -- that a health care	11:03:10	10 probably was 10 to 15 years ago that it -- not at	11:05:32
11 provider would be thinking about giving a patient	11:03:13	11 the time I trained and began practice, somewhere	11:05:39
12 who has been diagnosed with a subarachnoid	11:03:15	12 in the middle or near the end, in fact.	11:05:42
13 hemorrhage?	11:03:16	13 Q. Was this a medication where you	11:05:44
14 A. Mm-hmm. Well, there are those who	11:03:16	14 used it for a while and you thought, you know, I	11:05:46
15 believe that a calcium channel blocker, such as	11:03:22	15 just don't think this is doing anything, I'm not	11:05:48
16 Nimodipine, is appropriate in a setting of	11:03:27	16 going to use it anymore, or was it something you	11:05:49
17 subarachnoid hemorrhage. It is supposed to	11:03:32	17 used throughout your practice?	11:05:50
18 decrease the incidence of vasospasm, which is one	11:03:33	18 A. You don't see any immediate	11:05:51
19 of the complications of subarachnoid hemorrhage.	11:03:37	19 effects. As I said, the literature suggests that	11:05:53
20 Q. I am going stop you there for a	11:03:39	20 the incidence of vasospasm is less or that the	11:05:57
21 second so you can define vasospasm, and then I	11:03:40	21 degree of vasospasm that the patient subsequently	11:06:01
22 will go back to the calcium channel blocker.	11:03:43	22 gets might be less, so it's, I think, iffy kind of	11:06:05
23 What is a vasospasm?	11:03:45	23 literature, but most patients can tolerate it. I	11:06:11
24 A. Yes. It's a constriction of the	11:03:46	24 think that some patients can't tolerate the	11:06:16
25 blood vessels in the brain, thought to be due to	11:03:50	25 medication if their pulse rate is too slow or the	11:06:20
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1 blood pressure is too low, and this might	11:06:23	1 observation. So you can't give a lot of pain	11:08:54
2 aggravate both of those things. And so you can't	11:06:25	2 medicine or really strong pain medicine,	11:08:59
3 give it to every patient.	11:06:28	3 especially if it ends up sedating the patient to	11:09:01
4 <b>Q. Right. Okay. What other</b>	11:06:30	4 the point where it interferes with your	11:09:04
5 <b>medications would you think about giving to a</b>	11:06:32	5 observations.	11:09:06
6 <b>patient who has got a subarachnoid hemorrhage?</b>	11:06:34	6 <b>Q. Is the issue of sedating the</b>	11:09:07
7 A. Well, there was a time when they	11:06:36	7 <b>patient, is it just a matter of observing the</b>	11:09:09
8 were giving, I think it was Aminocaproic acid, to	11:06:43	8 <b>patient or are there concerns with how that might</b>	11:09:11
9 try and prevent the lysis of the blood clot that	11:06:48	9 <b>affect their respirations, or are there other</b>	11:09:14
10 was presumably sealing off the aneurysm from the	11:06:52	10 <b>concerns?</b>	11:09:17
11 first bleed.	11:06:56	11 A. Well, the first concern is simply	11:09:18
12 And, again, the literature suggested	11:06:57	12 that you don't want a patient who is alert and you	11:09:22
13 that the incidence of rebleeding when given this	11:07:00	13 can monitor easily by talking to them to become	11:09:25
14 drug was less, that the downside was that they had	11:07:04	14 drowsy. You know, that is the most important.	11:09:28
15 other complications. So to my knowledge, it's not	11:07:10	15 I mean, if you give way too much pain	11:09:30
16 widely used anymore.	11:07:15	16 medicine, yeah, you can depress their	11:09:34
17 <b>Q. Is that something that has not been</b>	11:07:16	17 respirations, but that takes a lot more than just	11:09:36
18 <b>widely used for a couple of years or --</b>	11:07:18	18 making them a little bit sedated.	11:09:39
19 A. Probably at least five, maybe ten.	11:07:20	19 <b>Q. When you say a lot more, what would</b>	11:09:42
20 <b>Q. All right. I am not going to</b>	11:07:24	20 <b>you mean?</b>	11:09:46
21 <b>necessarily include that in my list --</b>	11:07:28	21 A. Well, I can't give you numbers,	11:09:46
22 A. Okay.	11:07:30	22 but, you know, if a patient is alert and	11:09:50
23 <b>Q. -- since it was not widely used.</b>	11:07:30	23 responsive and talking to you, a normal dose of a	11:09:55
24 <b>What other medications -- as a</b>	11:07:31	24 pain medication will not make them apneic or	11:10:02
25 <b>neurosurgeon or a health care provider be</b>	11:07:33	25 suppress their respiration so that they don't	11:10:08
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1 <b>concerned about giving to a patient with a</b>	11:07:37	1 breathe.	11:10:10
2 <b>subarachnoid hemorrhage?</b>	11:07:39	2 <b>Q. Would you give a patient who has</b>	11:10:11
3 A. Well, I don't know if there is a	11:07:39	3 <b>got a subarachnoid hemorrhage, would you give them</b>	11:10:14
4 routine that every patient gets. I think some	11:07:46	4 <b>Percocet?</b>	11:10:16
5 doctors give anticonvulsants prophylactically.	11:07:51	5 A. Sure, you could if they were	11:10:17
6 <b>Q. Why is that?</b>	11:07:56	6 tolerating things by mouth, but that is an oral	11:10:20
7 A. Because anything that irritates the	11:07:56	7 drug. And if you were going to perform	11:10:24
8 brain, in this case it's blood, can have the	11:07:59	8 angiography or possible surgery on that patient,	11:10:28
9 potential of causing a seizure.	11:08:01	9 you wouldn't want to give them anything by mouth.	11:10:31
10 <b>Q. So anticonvulsants, antiseizure</b>	11:08:03	10 But if you thought, well, we are not going to do	11:10:35
11 <b>medication?</b>	11:08:08	11 anything until tomorrow, let's say. Let's say the	11:10:39
12 A. Yes.	11:08:08	12 patient is admitted 10:00 at night and you can't	11:10:41
13 <b>Q. Anything else, any other</b>	11:08:09	13 get the angiogram until 8:00 a.m. the next morning	11:10:44
14 <b>medication?</b>	11:08:10	14 and the surgery after that, yeah, you can give	11:10:46
15 A. Well, not that I am aware of	11:08:10	15 them Percocet, sure.	11:10:49
16 routinely. Again, you might end up giving	11:08:14	16 <b>Q. Would you give them Phenergan on</b>	11:10:50
17 something to lower blood pressure if it's	11:08:18	17 <b>top of Percocet?</b>	11:10:54
18 abnormally high.	11:08:20	18 A. Yes. That would be no problem. If	11:10:55
19 <b>Q. What would that be?</b>	11:08:22	19 they were nauseated, you would give them	11:10:57
20 A. Gosh, there is a whole variety of	11:08:24	20 Phenergan.	11:11:00
21 antihypertensive agents that can be given.	11:08:28	21 <b>Q. And with a patient who you had</b>	11:11:00
22 And you might give some pain medication,	11:08:32	22 <b>given -- is Percocet a narcotic?</b>	11:11:02
23 but you have to balance the desire to make the	11:08:41	23 A. Yes.	11:11:04
24 patient comfortable with the caveat that you don't	11:08:46	24 <b>Q. With a patient with a subarachnoid</b>	11:11:04
25 want to sedate them so that you interfere with the	11:08:51	25 <b>bleed where you had given a narcotic and then</b>	11:11:07
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